



Celebrating 5 Years of Competition

Model Hydrogen Fuel Cell Car Challenge Fact Sheet

At the U.S. Department of Energy's (DOE) National Science Bowl Model Hydrogen Fuel Cell Car Challenge, middle school students from around the country will take the future of automotive technology out for a spin. During the DOE National Middle School Science Bowl contestants will design, develop and race hydrogen fuel cell vehicles, competing for cash prizes for their school's science department. This competition brings to life President Bush's new American Competitiveness and Advanced Energy Initiatives, which seek to provide America's youth with a strong math and science education and develop clean-energy technologies to reduce our dependence on imported oil.

Additionally, the President's Hydrogen Fuel Initiative, a component of the Advanced Energy Initiative, invests \$289 million in 2007 to accelerate the development of pollution-free hydrogen fuel cells and affordable hydrogen-powered cars. This is an important step in diversifying our nation's energy mix and moving towards a hydrogen economy, which will help reduce America's need for imported oil in an environmentally friendly manner. The President's goal is to commercialize fuel cell vehicles, build a hydrogen infrastructure, and bring these vehicles to showrooms by 2020.

Highlights of the Hydrogen Fuel Cell Model Car Challenge

While the National Middle School Science Bowl focuses on academic expertise, this competition tests the creative engineering skills of many of the brightest math and science students in the nation as they gain hands-on experience in the automotive design process and with hydrogen fuel cell technology. Engineers from General Motors will be on hand to help the students with their cars and discuss GM's newest hydrogen car model. Highlights from this year's Competition include:

- **Teams design and build a working hydrogen fuel cell vehicle** – 26 teams of middle school students from across the country design cars and explain their creations. Students receive kits containing fuel and a motor. Previous designs have featured finishing touches as unique as compact-disk wheels.
- **Speed racing events** – A speed race down a 10-meter straightaway; rewards the cars that move fast, straight and are true to the track's guide wire.
- **Top three teams receive prizes** – Racing into the winner's circle brings rewards for the strongest teams. In the "speed race" the three fastest teams will take home trophies and cash prizes.

How Hydrogen Fuel Cell Vehicles Work

Hydrogen-powered vehicles use a simple chemical reaction to turn hydrogen and oxygen into water and electricity. Unlike a normal internal combustion engine that emits pollutants, the fuel cell's only byproduct is the pure water vapor. Hydrogen filling stations are already operational in Washington, DC, and throughout California. In fact, the United States Postal Service already uses a GM-made hydrogen vehicle for mail service in Virginia. Additionally, auto makers from around the globe are investing to make hydrogen-powered transportation ready for consumers within the next decade.